

REMARKS

Favorable reconsideration of this application, as presently amended and in light of the following discussion, is respectfully requested.

After entry of the foregoing amendment, Claims 1-3, 20, 27, 28, 34, 67 and 69-71 are pending in the present application. Claims 65, 66, 68 72, and 73 have been canceled without prejudice or disclaimer. Claims 1, 3, 20, 27, 28, 34, 67 and 69-71 have been amended.

Support for the amendments is found at least at Figure 4 of the specification. The amendments remove sensing features from the independent claims such that overdrive arrangements, and other applications (which do not utilize sensing) are now embraced by the claims. Thus any previous disclaimers express or implied with respect to sensing features of the claims are hereby expressly rescinded. Additionally, the Title of the invention has been amended to correct a spelling error. No new matter has been added.

By way of summary, the Official Action presents the following issues: Claims 1-3, 20, 27, 28, 34, and 65-73 stand rejected under 35 U.S.C. § 103 as being unpatentable over Levine (U.S. Patent 6,473,645, hereinafter “Levine”) in view of Mower (U.S. Patent 4,928,688, hereinafter “Mower”).

REJECTION UNDER 35 U.S.C. § 103

The Official Action has rejected Claims 1-3, 20, 27, 28, 34, and 65-73 under 35 U.S.C. § 103 as being unpatentable over Levine in view of Mower. The Official Action contends that Levine describes all of the Applicant’s claimed features with the exception of T-junction. However, the Official Action cites Mower as describing this more detailed aspect of the Applicant’s claimed advancements, and states that it would have been obvious, to one of ordinary skill in the art at the time the advancements were made, to combine the cited

references for arriving at the Applicant's claims. Applicant respectfully traverses the rejection.

Applicant's amended Claim 1 recites, *inter alia*, a method of configuring signaling locations within a heart for performing intrachamber resynchronization, including:

positioning signaling electrodes to deliver stimulation to a left ventricle of the heart, the signaling electrodes being positioned along a first and second axis interior to the heart, the second axis extending within the left ventricle to position at least one first signaling electrode of the signaling electrodes thereabout, the first axis extending into a right ventricular septum of the heart to position at least one second signaling electrode of the signaling electrodes at a position for delivering stimulation to the left ventricle; and

delivering, to the left ventricle, stimulation via the at least one first and second signaling electrodes for performing intrachamber resynchronization. (emphasis added)

Levine describes a system for controlling an electrode activation sequence in a multi-site cardiac stimulation device. As shown in Figure 1, a stimulation device (10) is linked to heart (12) by a three lead arrangement for delivering multi-chamber stimulation and shock therapy.<sup>1</sup> Right atrial cardiac signals are sensed via an atrial lead (20). Left atrial and/or left ventricular cardiac signals are sensed via lead (24). Likewise, a right ventricular lead (30) is provided for receiving cardiac signals, and delivering stimulation to the right ventricle.

Mower describes a method of treating a heart by simultaneously pacing both ventricles of the heart.<sup>2</sup>

Conversely, in an exemplary embodiment of the Applicant's claimed advancements, as amended, a horizontal and vertical placement of an electrode vector is provided relative to the left ventricle. Specifically, signaling electrodes are positioned to deliver stimulation to the left ventricle of the heart. The signaling electrodes are positioned along a first and second axis interior to the heart, the second axis extending within the left ventricle to position at least

<sup>1</sup> See Levine at Figure 1; column 7, lines 26-60.

<sup>2</sup> See Mower at Figure 1; column 4, line 64 to column 5, line 10.

one first signaling electrode of the signaling electrodes, thereabout. The first axis extends into a right ventricular septum of the heart to position at least one second signaling electrode of the signaling electrodes at a position for delivering stimulation to the left ventricle. A stimulation is delivered to the left ventricle via the at least one first and second signaling electrodes for performing the intrachamber resynchronization.

As can be appreciated, Levine deploys a multitude of electrodes, many in the right ventricle and many in the left ventricle. In this way, multi-site cardiac stimulation may be delivered. Additionally, Mower is directed to a simultaneous pacing of both ventricles of the heart. As such, neither Levine nor Mower, alone or in combination, provide the features of the Applicant's amended claims in which intrachamber resynchronization is performed within a single ventricle, the left ventricle.

Accordingly, Applicants respectfully request that the rejection of Claims 1-3, 20, 27, 28, 34, and 65-73 under 35 U.S.C. § 103 be withdrawn.

CONCLUSION

Consequently, in view of the foregoing amendment and remarks, it is respectfully submitted that the present application, including Claims 1-3, 20, 27, 34, 67 and 69-71 is patentably distinguished over the prior art, in condition for allowance, and such action is respectfully requested at an early date.

Respectfully submitted,

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